

## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/DE 03/03765

A. CLASSIFICATION OF SUBJECT MATTER  
 IPC 7 C12N5/06 A61K35/32

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, MEDLINE, WPI Data, PAJ, EMBASE, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01 68811 A (FRITSCH KARL GERD ;CO DON AG (DE); ANDERER URSULA (DE); LIBERA JEA) 20 September 2001 (2001-09-20)	1-4,9-15
Y	the whole document	5-8
X	ANDERER URSULA ET AL: "In vitro engineering of human autogenous cartilage." JOURNAL OF BONE AND MINERAL RESEARCH, vol. 17, no. 8, August 2002 (2002-08), pages 1420-1429, XP009026956 ISSN: 0884-0431 (ISSN print)	4,9-15
Y	the whole document	1-3,5-8
X	US 5 723 331 A (TUBO ROSS A ET AL) 3 March 1998 (1998-03-03)	4,9-15
Y	the whole document	1-3,5-8
	-/-	

☒ Further documents are listed in the continuation of box C.

☒ Parent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

5 March 2004

Date of mailing of the international search report

16/03/2004

Name and mailing address of the ISA

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 99 22747 A (GEN HOSPITAL CORP) 14 May 1999 (1999-05-14) the whole document	1-15
Y	OCHI MITSUO ET AL: "Current concepts in tissue engineering technique for repair of cartilage defect" ARTIFICIAL ORGANS, vol. 25, no. 3, March 2001 (2001-03), pages 172-179, XP002272583 ISSN: 0160-564X the whole document	1-15
Y	WO 02 10351 A (SITTINGER MICHAEL ;WANJURA FRANK (DE); GROEGER ANDREAS (DE); HAISC) 7 February 2002 (2002-02-07) the whole document	1-3,5-8, 12-15
Y	NISHIKORI T ET AL: "Effects of low-intensity pulsed ultrasound on proliferation and chondroitin sulfate synthesis of cultured chondrocytes embedded in Atelocollagen(R) gel" JOURNAL OF BIOMEDICAL MATERIALS RESEARCH, vol. 59, no. 2, February 2002 (2002-02), pages 201-206, XP002272584 ISSN: 0021-9304 the whole document	1-3,5-8, 12-15
Y	MEYER U ET AL: "Mechanical tension in distraction osteogenesis regulates chondrocytic differentiation." INTERNATIONAL JOURNAL OF ORAL AND MAXILLOFACIAL SURGERY. DENMARK DEC 2001; vol. 30, no. 6, December 2001 (2001-12), pages 522-530, XP009027141 ISSN: 0901-5027 the whole document	1-3,5-8, 12-15
Y	BRITTBERG M ET AL: "Autologous chondrocytes used for articular cartilage repair: an update." CLINICAL ORTHOPAEDICS AND RELATED RESEARCH, (2001 OCT) (391 SUPPL) S337-48. REF: 39 , XP009027036 the whole document	1-3,5-8, 12-15

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## G.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	BRITTBERG M ET AL: "TREATMENT OF DEEP CARTILAGE DEFECTS IN THE KNEE WITH AUTOLOGOUS CHONDROCYTE TRANSPLANTATION" NEW ENGLAND JOURNAL OF MEDICINE, THE, MASSACHUSETTS MEDICAL SOCIETY, WALTHAM, MA, US, vol. 331, no. 14, 1994, pages 889-895, XP001015827 ISSN: 0028-4793 the whole document	
P,Y	WIESMANN H P ET AL: "Extracorporal biophysical stimulation of osteoblast cultures for bone tissue engineering." TISSUE ENGINEERING, vol. 9, no. 4, August 2003 (2003-08), pages 796-797, XP009026955 Second Meeting of the European Tissue Engineering Society; Genoa, Italy; September 03-06, 2003 ISSN: 1076-3279 (ISSN print) the whole document	1-3, 5-8, 12-15

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International application No.

**Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 5-14 relate to a method for treatment of the human or animal body, the search was carried out on the basis of the alleged effects of the compound or composition.

2. ☒ Claims Nos.: 1, 3, 4, 5, 12, 14 and 15 (all in part)  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

Continuation of I.2

3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

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The current claims 1, 3, 4, 5, 12, 14 and 15 relate to a product, or its use, characterized by a desirable characteristic or property, that is being producible by extracting cells from a human or animal organism and cultivating these long enough to form a cell aggregate.

The claims therefore encompass all products, or uses thereof, that have this characteristic or property, but the application provides support by the description (PCT Article 5) for only a limited number of such products, etc. In the present case the claims lack the proper support and the application lacks the requisite disclosure to such an extent that it appears impossible to carry out a meaningful search covering the entire range of protection sought. Moreover, the claims also lack the requisite clarity (PCT Article 6) since they attempt to define the product in terms of the desired result. This lack of clarity too is such that it is impossible to carry out a meaningful search covering the entire scope of protection sought. Therefore, the search was directed to the parts of the claims that appear to be clear, supported or disclosed in the above sense, that is the parts concerning cartilage or bone replacement structures as indicated in the examples.

The applicant is advised that claims or parts of claims relating to inventions in respect of which no international search report has been established normally cannot be the subject of an international preliminary examination (PCT Rule 66.1(e)). In its capacity as International Preliminary Examining Authority the EPO generally will not carry out a preliminary examination for subjects that have not been searched. This also applies to cases where the claims were amended after receipt of the international search report (PCT Article 19) or where the applicant submits new claims in the course of the procedure under PCT Chapter II.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No.

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0168811	A	20-09-2001	DE 10013223 A1	11-10-2001
			AU 3928701 A	24-09-2001
			CA 2403120 A1	13-09-2002
			WO 0168811 A2	20-09-2001
			EP 1265986 A2	18-12-2002
			US 2003153078 A1	14-08-2003
US 5723331	A	03-03-1998	AU 2435495 A	29-11-1995
			AU 2468995 A	29-11-1995
			WO 9530383 A1	16-11-1995
			WO 9530742 A1	16-11-1995
			US 5786217 A	28-07-1998
WO 9922747	A	14-05-1999	CA 2307743 A1	14-05-1999
			EP 1030676 A1	30-08-2000
			JP 2001521786 T	13-11-2001
			WO 9922747 A1	14-05-1999
			US 6183737 B1	06-02-2001
			US 2003099620 A1	29-05-2003
			US 2001006634 A1	05-07-2001
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			WO 0210351 A2	07-02-2002
			EP 1307543 A2	07-05-2003